

AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph [0002] with the following paragraph rewritten in amendment format:

[0002] The invention generally relates to an imaging method for a multi-slice spiral CT scan with 3D back projection. An object to be examined may be scanned spirally with reference to its absorption behavior by way of a rotating ray bundle moving in the direction of the axis of rotation. ~~[[the]]~~ The measured absorption data may be collected by the detector of planar design. The measured absorption data are projected onto a virtual detector, preferably at the fulcrum of the rotation, and filtered, and for the reconstruction of the absorption value of at least one voxel use is made of those measured and filtered data that have been produced by rays which penetrate this at least one voxel. The invention also generally relates to a CT unit for carrying out this method and having appropriate imaging device.

Please replace Paragraph [0028] with the following paragraph rewritten in amendment format:

[0028] The X-ray source 2 with the beam diaphragm 3 on the one hand, and the detector system 5 with the beam diaphragm 6, on the other hand, are fitted on a rotary frame 7 opposite one another in such a way that a pyramidal X-ray bundle whose edge rays are denoted by eight, which emanates from the X-ray source 2 during operation of the CT unit and is stopped down by the adjustable beam diaphragm 3, strikes the detector system 5. In this case, the ~~[[bean]]~~ beam diaphragm 6 is set to correspond to the cross section of the X-ray bundle, set by means of the beam diaphragm 3, such that in the accordance with different operating modes only that region of the detector system 5 is exposed which is struck directly by the X-ray bundle. Only eight rows of detector elements 4 are used in figures 1 and 2, while the further rows,

indicated by dots, are covered by the beam diaphragm 6 and therefore not active.

Please replace Paragraph [0050] with the following paragraph rewritten in amendment format:

[0050] For the purpose of the 3D back projection, which relates to the voxel $V_{(x,y,z)}$, the rays that penetrate a voxel in this volume to be examined are considered so as to determine the ~~absortivity~~ absorptivity of a voxel. In the case of continuous revolution above the z-axis and projections of this one voxel $V_{(x,y,z)}$ onto the virtual detector D_v , the track of the projection of this voxel runs over the multiplicity of the detector images considered, as illustrated in figure 6 by the track B_v . Here, the line of section of a segment plane in the respective virtual detector is plotted for different directions of protection. 32 different directions of projection are considered in this case. The inventive method in this case filters the individual detector points in different directions f that respectively correspond to the direction of the projections of the segment plane which runs through this voxel. It may be pointed out in order to avoid misunderstandings that this number is not to be equated with the row number of the detector.